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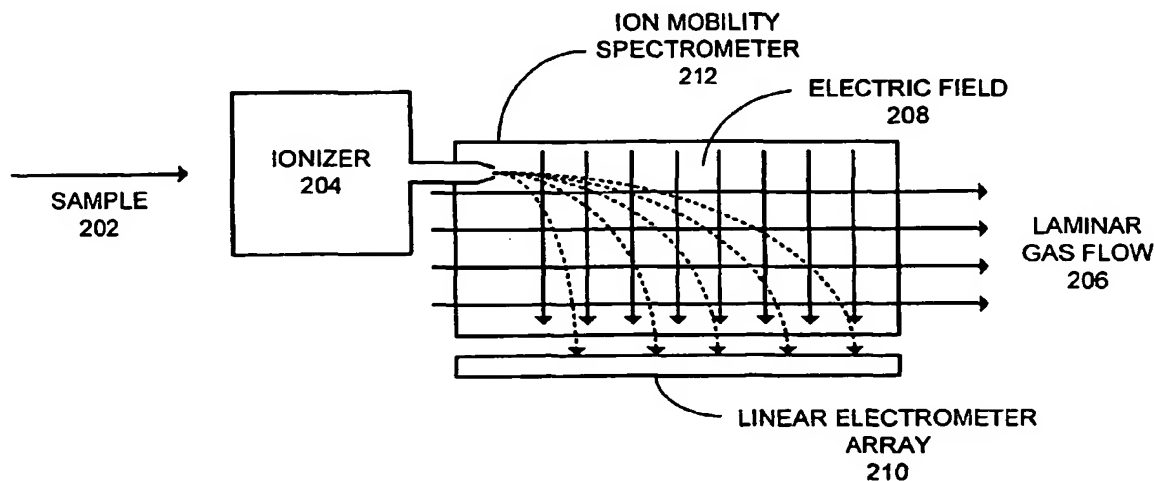
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(54) Title: METHOD AND APPARATUS FOR PERFORMING ION MOBILITY SPECTROMETRY(57) **Abstract:** One embodiment of the present invention provides a system for performing ion or particle mobility spectrometry. The system operates by first receiving a sample for analysis. Next, the system ionizes the sample and injects the ionized sample into a laminar gas flow. An electric field crosses the laminar gas flow so that the laminar gas flow and the electric field combine to spatially separate ions of the analytes based on ion mobility and so that the spatially separated ions contact different elements of an electrometer array. Next, the system analyzes the output of the electrometer array to determine the mobility of the analytes.